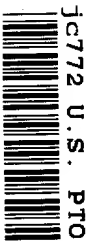


02/24/00



Jc772 U.S. PTO

02-25-00

Please type a plus sign (+) inside this box →

Approved for use through 09/30/2000. OMB 0651-0032  
 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>UTILITY PATENT APPLICATION TRANSMITTAL</b> <small>(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))</small>	Attorney Docket No.	
	First Inventor or Application Identifier	PETER I. COLMAN
	Title	WATER DELIVERY SYSTEM WITH MULTIPLE HEAD CAPABILITY
	Express Mail Label No.	EK 094323400US

PTO  
09/512096  
02/24/00

<b>APPLICATION ELEMENTS</b> <small>See MPEP chapter 600 concerning utility patent application contents.</small>	<b>ADDRESS TO:</b> Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
1. <input checked="" type="checkbox"/> * Fee Transmittal Form (e.g., PTO/SB/17) <small>(Submit an original and a duplicate for fee processing)</small> 2. <input checked="" type="checkbox"/> Specification [Total Pages <b>24</b> ] <small>(preferred arrangement set forth below)</small> - Descriptive title of the Invention - Cross References to Related Applications - Statement Regarding Fed sponsored R & D - Reference to Microfiche Appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claim(s) - Abstract of the Disclosure 3. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <b>12</b> ] 4. Oath or Declaration [Total Pages <b>1</b> ] a. <input checked="" type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 C.F.R. § 1.63(d)) <small>(for continuation/divisional with Box 16 completed)</small> i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).	5. <input type="checkbox"/> Microfiche Computer Program (Appendix) 6. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) a. <input type="checkbox"/> Computer Readable Copy b. <input type="checkbox"/> Paper Copy (identical to computer copy) c. <input type="checkbox"/> Statement verifying identity of above copies
<b>ACCOMPANYING APPLICATION PARTS</b>	
7. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) 8. <input type="checkbox"/> 37 C.F.R. § 3.73(b) Statement of Attorney (when there is an assignee) <input type="checkbox"/> Power of Attorney 9. <input type="checkbox"/> English Translation Document (if applicable) 10. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations 11. <input type="checkbox"/> Preliminary Amendment 12. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) (Should be specifically itemized) 13. <input checked="" type="checkbox"/> * Small Entity Statement(s) filed in prior application, Status still proper and desired (PTO/SB/09-12) <input type="checkbox"/> Statement filed in prior application, Status still proper and desired 14. <input type="checkbox"/> Certified Copy of Priority Document(s) (if foreign priority is claimed) 15. <input type="checkbox"/> Other:	

\* NOTE FOR ITEMS 1 & 13: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: \_\_\_\_\_ / \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Group / Art Unit: \_\_\_\_\_

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**17. CORRESPONDENCE ADDRESS**
☐ Customer Number or Bar Code Label \_\_\_\_\_ or ☒ Correspondence address below  
 (Insert Customer No. or Attach bar code label here)

Name	DOROTHY S. MORSE				
Address	515 PARK DRIVE, NW				
City	BRADENTON	State	FLORIDA	Zip Code	34209-1847
Country	UNITED STATES	Telephone	941-747-4313	Fax	941-748-4008

Name (Print/Type)	DOROTHY S. MORSE	Registration No. (Attorney/Agent)	38,977
Signature		Date	02-24-2000

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

09512096 022400

**STATEMENT CLAIMING SMALL ENTITY STATUS  
(37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR**

Docket Number (Optional)

Applicant, Patentee, or Identifier: PETER I. COLMAN

Application or Patent No.: \_\_\_\_\_

Filed or Issued: FEBRUARY 24, 2000

Title: WATER DELIVERY SYSTEM WITH MULTIPLE HEAD CAPACITY

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above.  
☐ the application identified above.  
☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.  
☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

PETER I. COLMAN  
NAME OF INVENTOR

  
NAME OF INVENTOR

NAME OF INVENTOR

  
Signature of inventor

Signature of inventor

Signature of inventor

02-24-2000  
Date

Date

Date

1  
2  
3 Patent Application

4  
5 of

6  
7 Peter I. Colman

8  
9 for

10  
11 Water Delivery System With Multiple Head Capability

12  
13 BACKGROUND - FIELD OF INVENTION

14 The invention herein was disclosed in U.S. provisional patent application number  
15 60/121,356, entitled Water Delivery System With Multiple Head Capacity and filed on February  
16 24, 1999, by its sole inventor, Peter I. Colman, the filing date of February 24, 1999, being  
17 claimed herein as a priority date for the present invention.

18 The present invention relates to water delivery systems, specifically to a water delivery  
19 system for shower stalls that divides water delivered from one outflow alternatively into two,  
20 three, four, five, and six water streams. The system would comprise an elongated larger water  
21 delivery member having two approximately parallel showerhead attachment arms with two 90°  
22 angles and one approximately 145° angle between them. The system would also comprise a  
23 shorter water delivery member having two approximately parallel showerhead attachment arms  
24 with two approximately 90° angles between them. Each could be used separately, or in  
25 combination. The 145° angle in the larger water delivery member allows ample ceiling clearance  
26 for the system when the larger member is rotated for its installation and removal from water  
27 delivery pipes positioned at heights commonly used for human shower applications. Also, the  
28 female connection on the shorter water delivery member of the system would have a sufficiently  
29 extended threaded connection to allow the shorter water delivery member to be rotated 90° from  
30 a horizontal to a vertical orientation without leaking where a showerhead connected to the

1 uppermost arm could be used to wash one's hair while a showerhead connected to the lower arm  
2 could remain directed toward the user's body. In the horizontal position, two people could  
3 simultaneously shower in the same shower stall and each have a water stream directed  
4 exclusively toward their use. The same or different types of showerheads could be attached to  
5 the ends of the larger and smaller water delivery members, including hand-held showerheads.  
6 Applications, although not limited to such use, could include such diversity as routine personal  
7 hygiene to the rinsing of people exposed to hazardous materials.

## 9 BACKGROUND - DESCRIPTION OF PRIOR ART

10 A single showerhead is sometimes insufficient to deliver ample water over a wide surface  
11 area on a person's body to give that person a satisfying shower experience. Dual showerheads  
12 are known and offer a person needing to be rinsed more water flow and faster rinsing. However,  
13 the capability of the present invention to offer varying combinations of two, three, four, five, and  
14 six showerheads, gives users even more flexibility in achieving a shower experience ideal for  
15 them. Larger people in both height and girth would be able to adjust two, three, four, five, and  
16 six water sprays in varying degrees of overlap to achieve the ideal combination of concentrated  
17 water flow and rinsed surface area. Also, the present invention is distinguished from other dual  
18 or multiple showerhead water delivery systems in that its smaller water delivery member has  
19 closely spaced apart showerheads which can easily be directly in a 360° rotation and can be  
20 pointed away from one another for two people to shower in the same shower stall, with each  
21 person becoming rinsed faster than otherwise would be possible. If two smaller water delivery  
22 members were attached to the larger one, each person could have his or her own independent  
23 water sprays directed toward the body, with a second available for rinsing hair, and optionally a  
24 third water spray from a hand-held showerhead to provide more precisely directed rinsing.  
25 During use for rinsing people exposed to hazardous materials, the greater amount of water  
26 delivered by the present invention, as well as the greater surface area covered at one time, has an

1 important advantage. There is no known invention having all of the advantages of the present  
2 invention.

#### 3 4 SUMMARY OF INVENTION - OBJECTS AND ADVANTAGES

5 It is the primary object of this invention to provide a multiple-piece water delivery system  
6 for the attachment of two, three, four, five, or six showerheads that furnishes greater water flow  
7 for faster rinsing. It is also an object of this invention to provide a water delivery system for the  
8 attachment of showerheads which can be made divergent to allow two persons to shower in the  
9 same stall together. A further object of this invention is to provide a water delivery system with  
10 an elongated larger member which incorporates a 145° angle between showerhead connection  
11 arms to accommodate the rotation of the larger water delivery member during installation and  
12 removal. It is also an object of this invention to provide a water delivery system for the  
13 attachment of showerheads in which the shorter water delivery member has sufficiently deep  
14 threads so that it may be horizontally or vertically positioned without leaking. It is also an object  
15 of this invention to provide a water delivery system for the attachment of showerheads that is  
16 cost effective and aesthetically pleasing in design for widespread manufacture and use.

17 As described herein, properly manufactured and connected to a positive pressure water  
18 delivery pipe, the present invention would provide a water delivery system for shower stalls  
19 which divides water delivered from one outflow into either two, three, four, five, or six water  
20 streams. The system would comprise an elongated larger water delivery member having two  
21 approximately parallel showerhead attachment arms with two 90° angles and one approximately  
22 145° angle between them. The system would also comprise a shorter water delivery member  
23 having two approximately parallel showerhead attachment arms with two approximately 90°  
24 angles between them. Each could be used separately, or in combination with the other. Each  
25 arm could also have a water cutoff valve for restricting or eliminating water flow from one or  
26 more showerhead for special purposes. The 145° angle in the larger water delivery member

1 allows ample ceiling clearance for the system when the larger member is rotated for its  
2 installation and removal from water delivery pipes positioned at heights commonly used for  
3 human shower applications. Also, the female connection on the shorter water delivery member  
4 of the system would have a sufficiently extended threaded connection to allow the shorter water  
5 delivery member to be rotated 90° from a horizontal to a vertical orientation without leaking  
6 where a showerhead connected to the uppermost arm could be used to wash one's hair while a  
7 showerhead connected to the lower arm could remain directed toward the user's body. Such a  
8 connection could also be made into a pivot point. In the horizontal position, two people could  
9 simultaneously shower in the same shower stall and each have a water stream directed  
10 exclusively toward their use. The same or different types of showerheads could be attached to  
11 the ends of the larger and smaller water delivery members, including hand-held showerheads.  
12 Optionally, each smaller water delivery members could include a third showerhead connection to  
13 add a third water spray from a hand-held showerhead that would provide even more precisely  
14 targeted rinsing. Applications, although not limited to such use, could include such diversity as  
15 routine personal hygiene to the rinsing of people exposed to hazardous materials. The capability  
16 of the present invention to offer varying combinations of two, three, four, five, and six  
17 showerheads, gives users even more flexibility in achieving a shower experience ideal for them.  
18 Larger people in both height and girth would be able to adjust two, three, four, five, or six water  
19 sprays in varying degrees of overlap to achieve the ideal combination of concentrated water flow  
20 and rinsed surface area. Also, the present invention is distinguished from other dual or multiple  
21 showerhead water delivery systems in that its smaller water delivery member has closely spaced-  
22 apart showerheads, approximately three inches in the preferred embodiment, which can easily be  
23 directly in a 360° rotation and can be pointed away from one another for two people to shower in  
24 the same shower stall, with each person becoming rinsed faster than otherwise would be possible.  
25 If two smaller water delivery members were attached to the larger one, each person could have  
26 his or her own independent water sprays directed toward the body, with a second available for

1 rinsing hair, and optionally a third water spray from a hand-held showerhead to provide more  
2 precisely directed rinsing. During use for rinsing people exposed to hazardous materials, the  
3 greater amount of water delivered by the present invention, as well as the greater surface area  
4 covered at one time, has an important advantage.

5 The description herein provides preferred embodiments of the present invention but  
6 should not be construed as limiting the scope of the water delivery invention. For example,  
7 variations in the depth of the male threads on the showerhead attachment arms of both the large  
8 and small water delivery members, the orientation of the smaller water delivery member during  
9 use, and the use of one or more water cutoff valves, other than those shown and described herein,  
10 may be incorporated into the present invention. Thus the scope of the present invention should  
11 be determined by the appended claims and their legal equivalents, rather than the examples  
12 given.

#### 13 BRIEF DESCRIPTION OF THE DRAWINGS

14 Fig. 1 is a perspective view of a first embodiment of the elongated larger water delivery member  
15 of the present invention.

16 Fig. 2 is a side view of the first embodiment of the larger water delivery member attached to a  
17 water delivery pipe in a shower stall, with each arm having a water cutoff valve and showerheads  
18 similar in configuration attached thereto.

19 Fig. 3 is a side view of the first embodiment of the larger water delivery member attached to a  
20 water delivery pipe in a shower stall, with each arm having a water cutoff valve and two different  
21 types of showerheads attached thereto.

22 Fig. 4 is a perspective view of a first embodiment of the smaller water delivery member of the  
23 present invention.

24 Fig. 5 is a side view of the first embodiment of the smaller water delivery member attached to a  
25 water delivery pipe in a shower stall, with each arm having a showerhead attached thereto and the  
26

arms in a vertical position relative to one another.

Fig. 6 is a side view of the first embodiment of the smaller water delivery member attached to a water delivery pipe in a shower stall, with each arm having a showerhead attached thereto and the arms in a horizontal position relative to one another.

Fig. 7 is a side view of the first embodiments of both the larger water delivery member and the smaller water delivery member, with the larger water delivery member attached to a water delivery pipe in a shower stall, with each arm being in a vertical position relative to one another, with each arm having a water cutoff valve and a smaller water delivery member attached to each arm of the larger water delivery member and the arms of the smaller water delivery member also in a vertical position relative to one another.

Fig. 8 is a side view of a second embodiment of the elongated larger water delivery member of the present invention with a threaded swivel adaptor attached to the outflow connector and push-button controls for selective water cut-off.

Fig. 9 is a perspective bottom view of the second embodiment of the larger water delivery member having a threaded swivel adaptor attached to the outflow connector, barrel valves each having a push-button control for selective water cut-off, and a flattened lower surface.

Fig. 10 is a top view of the second embodiment of the larger water delivery member having a threaded swivel adaptor attached to the outflow connector, barrel valves each with a push-button control for selective water cut-off, and a flattened upper surface.

Fig. 11 is a bottom view of the second embodiment of the larger water delivery member having a threaded swivel adaptor attached to the outflow connector, a flattened lower surface, and barrel valves each with a push-button control for selective water cut-off and shown in an opened configuration.

Fig. 12 is a perspective view of a second embodiment of the smaller water delivery member of the present invention having a threaded swivel adaptor attached to the outflow connector, the outflow connector having an aesthetically pleasing artistic design, barrel valves each with a push-

1 button control for selective water cut-off, a third male connection with a threaded cap, and a  
2 flattened upper surface.

3 Fig. 13 is a lower perspective view of the second embodiment of the smaller water delivery  
4 member having a threaded swivel adaptor attached to the outflow connector, barrel valves each  
5 with a push-button control for selective water cut-off, a third male connection with a threaded  
6 cap, and a flattened lower surface.

7 Fig. 14 is a top view of the second embodiment of the smaller water delivery member having a  
8 threaded swivel adaptor attached to the outflow connector, barrel valves each with a push-button  
9 control for selective water cut-off, a third male connection with a threaded cap, and a flattened  
10 upper surface.

11 Fig. 15 is a bottom view of the second embodiment of the smaller water delivery member having  
12 barrel valves each with a push-button control for selective water cut-off and shown in an opened  
13 configuration, a third male connection with a threaded cap, and a flattened lower surface.

14 Fig. 16 is a back view of the second embodiment of the smaller water delivery member having a  
15 threaded swivel adaptor attached to the outflow connector, barrel valves, a third male connection,  
16 and a flattened lower surface.

17 Fig. 17 is a front view of the second embodiment of the smaller water delivery member having a  
18 threaded swivel adaptor attached to the outflow connector, push-button controls for selective  
19 water cut-off, and a flattened lower surface.

20 Fig. 18 is a front view of the second embodiment of the smaller water delivery member having a  
21 threaded swivel adaptor attached to the outflow connector, the outflow connector having an  
22 aesthetically pleasing artistic design, push-button controls for selective water cut-off, a third male  
23 connection, and a flattened lower surface.

## 24 25 DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

26 Fig. 1 shows a first preferred embodiment of the elongated larger water delivery member

2 of the present invention. Two approximately parallel arms 10 and 16 each have a distal end with an externally threaded male connection, numbered 12' and 12 respectively. Arms 10 and 16 are separated by first cross member 8 and second cross member 14. Although Fig. 1 shows first cross member 8 being slightly shorter in length than second cross member 14, the length of each is not critical and it is also considered within the scope of the present invention for second cross member 14 to be shorter than first cross member 8, as well as for both cross members to have identical length dimensions. The angle 18' between arm 10 and adjacent first cross member 8 is approximately 90° and permits water flowing into arm 10 to be diverted at an approximate 90° angle relative to first cross member 8. The angle 20 between cross members 8 and 14 is approximately 145° so that as larger water delivery member 2 is rotated for installation and removal from an existing water delivery pipe, shown in Fig. 2 as number 24, arm 16 will not come into contact with the ceiling above the shower stall, the ceiling being represented by the number 50 in Fig. 2. The angle 18 between arm 16 and adjacent cross member 14 is slightly larger than 90° and of a dimension that permits water flowing into arm 16 to be diverted at an approximate 90° angle relative to first cross member 8. Close to arm 10 and connected through the surface of cross member 8 in a position opposed to arm 10, Fig. 1 shows a short outflow connector 4 with internal threads 6 adapted for connection to external threads (not shown) on water delivery pipe 24. It is contemplated for larger water delivery member 2 to be made from any plastic or metal material commonly used for water delivery purposes, such as PVC, ABS plastic, stainless steel, brass with chrome plating, or copper. Also, it is contemplated for larger water delivery member 2 to be gold-plated, or to be covered with materials suitable for water delivery purposes having any color, texture, or design. Although larger water delivery system 2 could be used in any orientation, in the first preferred embodiment larger water deliver member 2 would be used with arm 10 in a position above arm 16. Also, although larger water deliver members 2 could be made from larger diameter materials, for use in connection to the existing standard size of water delivery pipe in shower stalls, in the first preferred embodiment short

1 outflow connector 4, arms 10 and 16, as well as cross members 8 and 14 would be made from  
2 tubing having an internal diameter of one-half inch.

3 Fig. 2 shows the short outflow connector 4 of the first preferred embodiment of larger  
4 water delivery member 2 attached to water delivery pipe 24 in a shower stall defined by floor 38,  
5 ceiling 50, and wall 36. The vertical height of the shower stall is represented by number 22 and  
6 in modern construction is typically seventy-eight inches. Arm 10 has been placed in a position  
7 above arm 16, with first cross member 8 at an approximately 45° angle relative to wall 36 and  
8 second cross member 14 approximately parallel to wall 36. Arms 10 and 16 each have a water  
9 shut-off valve, 26a and 26b respectively, to allow water to be diverted from one or the other  
10 showerhead 28a or 28b upon demand. Although water shut-off valves 26a and 26b appear in  
11 Fig. 2 to have a rotatable configuration, such means for water shut-off is not critical and it is  
12 considered within the scope of the present invention to have other means for water shutoff, such  
13 as push buttons 56 and 56' shown in Figs. 8-15. Showerhead 28a is attached to the male threaded  
14 connection 12' on arm 10, with showerhead 28b attached to the male threaded connection 12 on  
15 arm 16. Fig. 2 also shows the water spray 32 from showerhead 28a and the water spray 34 from  
16 showerhead 28b beginning to mix in the immediate area of the number 30. Fig. 3 is similar to  
17 Fig. 2, but also shows tubing 40 attached between showerhead 28b and threaded male connection  
18 12 on arm 16. Although not illustrated in Fig. 3, showerhead 28b would be detachably connected  
19 to arm 16 so that showerhead 28b can be used as a hand-held shower unit.

20 Fig. 4 shows a first preferred embodiment of the smaller water delivery member 42 of the  
21 present invention. Two approximately parallel arms 48 and 46 each have a distal end with an  
22 externally threaded male connection, numbered 12' and 12 respectively. Arms 48 and 46 are  
23 separated by a single cross member 44. The angle 18' between arm 48 and cross member 44 is  
24 approximately 90°. The angle 18 between arm 46 and cross member 44 is also approximately  
25 90°. Centrally between arm 48 and arm 46, and connected through the surface of cross member  
26 44 in an opposed position from arms 48 and 46, Fig. 4 shows a short outflow connector 4 with

1 internal threads 6 for connection to water delivery pipe 24. Fig. 4 also shows the upper edge of  
2 short outflow connector 4 being configured for use as a pivot point 52. It is contemplated for  
3 smaller water delivery member 42 to also be made from any plastic or metal material commonly  
4 used for water delivery purposes, such as PVC, ABS plastic, stainless steel, brass with chrome  
5 plating, or copper. Also, it is contemplated for smaller water delivery member 42 to be gold-  
6 plated, or to be covered with materials suitable for water delivery purposes having any color,  
7 texture, or design. However, when larger water delivery member 2 is used in combination with  
8 smaller water delivery member 42, in the first preferred embodiments both larger and smaller  
9 water delivery members 2 and 42 respectively would be made from the same materials.  
10 Although smaller water delivery member 42 could be used in any orientation, in the first  
11 preferred embodiment larger water deliver member 2 would be used with arm 10 in a position  
12 above arm 16. Although smaller water deliver member 2 could be made from larger diameter  
13 materials, for use in connection to the existing standard size of water delivery pipe in shower  
14 stalls, in the first preferred embodiment short outflow connector 4, arms 48 and 46, as well as  
15 cross member 44 would be made from tubing having an internal diameter of approximately one-  
16 half inch.

17 Fig. 5 shows the short outflow connector 4 of the first preferred embodiment of smaller  
18 water delivery member 42 attached to water delivery pipe 24 in a shower stall defined by floor  
19 38, ceiling 50, and wall 36. The vertical height of the shower stall is represented by the number  
20 22. Arm 48 has been placed in a position approximately vertical with arm 46, with cross  
21 member 44 at an approximately 45° angle relative to wall 36. Showerhead 28a is attached to the  
22 male threaded connection 12 on arm 48, with showerhead 28b attached to the male threaded  
23 connection 12 on arm 46. Fig. 5 also shows the water spray 32 from showerhead 28a and the  
24 water spray 34 from showerhead 28b beginning to mix approximately in the area of number 30.  
25 Arrows show that smaller water delivery member 42 can be rotated so that showerheads 28a and  
26 28b become positioned in alternative orientations.

Fig. 6 shows outflow connector 4 of the first preferred embodiment of smaller water delivery member 42 attached to water delivery pipe 24. Fig. 6 also shows showerhead 28a positioned behind showerhead 28b with arm 46 visible and arm 48 hidden from view since arm 46 is in a position approximately horizontal with arm 48. While not shown, cross member 44 is positioned at an approximately 45° angle relative to wall 36. Arrows show that smaller water delivery member 42 can be rotated so that showerheads 28a and 28b become placed into a variety of alternative orientations. Fig. 6 also shows a shower stall being defined by wall 36, ceiling 50, and floor 38, with the vertical height of the shower stall being represented by the number 22. Fig. 6 also shows water spray 32 projecting from showerhead 28a, water spray 34 projecting from showerhead 28b, and the water in both sprays 32 and 34 beginning to mix immediate to the area around number 30.

Fig. 7 shows the short outflow connector 4 of first embodiment of larger water delivery member 2 attached to water delivery pipe 24 in a shower stall defined by floor 38, ceiling 50, and wall 36. The vertical height of the shower stall is represented by number 22. Arm 10 has been placed in a position above arm 16, with cross member 8 at an approximately 45° angle relative to wall 36 and cross member 14 approximately parallel to wall 36. Arms 10 and 16 each have a water shut-off valve, 26a and 26b respectively, to allow water to be diverted from one or the other of the first preferred embodiments of smaller water delivery members 42 upon demand. Fig. 7 further shows smaller water delivery member 42a connected to arm 10 and smaller water delivery member 42b connected to arm 16. Fig. 7 also shows smaller water delivery member 42a with showerheads 28a and 28b positioned with showerhead 28a above showerhead 28b, and smaller water delivery member 42b with showerheads 28c and 28d positioned with showerhead 28c above showerhead 28d. Fig. 7 further shows the water spray 32a and 32b from showerheads 28a and 28b respectively, and the water spray 34a and 34b from showerheads 28c and 28d beginning to mix in the immediate area around three positions indicated by 30.

Figs. 8-11 show a second embodiment of the elongated larger water delivery member of

the present invention referenced by the number 70 and having a threaded swivel adaptor 54 attached to its outflow connector 4. Figs. 8-11 also show the second embodiment of larger water delivery member 70 having two showerhead attachment arms 10 and 16. Figs. 8-9 and 11 show each arm 10 and 16 with a distal end having an externally threaded male connection, numbered 12' and 12, respectively. Distal ends 12' and 12 are approximately parallel to one another. Arms 10 and 16 are separated by first and second cross members, numbered 8 and 14 respectively. Each has a flattened upper surface, as denoted by the numbers 62' and 62, respectively in Figs. 8 and 10. Although Fig. 8 shows first cross member 8 being slightly longer than second cross member 14, the relative length of each is not critical as long as showerheads attached to arms 10 and 16 will not come into contact with a shower stall ceiling 50 during attachment or removal of outflow connector 4 from shower water outflow pipe 24, shown in Figs. 2 and 3. Figs. 8 and 9 show the angle 18' between arm 10 and adjacent first cross member 8 being approximately 90° and permitting water flowing into arm 10 to be diverted at an approximate 90° angle relative to first cross member 8. The angle 20 between cross members 8 and 14, shown in Figs. 8 and 9, is approximately 145° to provide shower stall ceiling 50 clearance during installation and removal. The angle 18 between arm 16 and adjacent cross member 14, also shown in Figs. 8 and 9, is slightly larger than 90° and of a dimension that permits water flowing into arm 16 to be diverted at an approximate 90° angle relative to first cross member 8. Closer to arm 10 and connected through the surface of cross member 8 in an opposed position from arm 10, Figs. 8-10 show a short outflow connector 4 adapted for connection to external threads (not shown) on water delivery pipe 24. In addition, Figs. 8-9 and 11 show a flattened lower surface 60 extending across first cross member 8 and second cross member 14. Although not critical for such use, informational or design markings (not shown) could be attached to or formed into flattened lower surface 60. Figs. 8 and 10 show a flattened upper surface, numbered 62' and 62 respectively, on first cross member 8 and second cross member 14. Flattened upper surfaces 62' and 62 can help to form an overall aesthetically pleasing for the present invention, or in the alternative could be

used for the addition of informational or design markings (not shown). Figs. 9-11 show barrel valves 58' and 58 being attached through each showerhead attachment arm, 10 and 16 respectively, while Figs. 8-11 show the push-button controls 56 and 56' contemplated for selective water cut-off in the second embodiment of the larger water delivery member 70. In addition, Figs. 9-11 show barrel valves 58' and 58 in opened positions.

Figs. 12-18 show a second embodiment of the smaller water delivery member of the present invention identified by the number 72 and having a threaded swivel adaptor 54 attached to its outflow connector 4. Figs. 12-14 and 16-18 show the second embodiment of smaller water delivery member 72 having two approximately parallel showerhead attachment arms 48 and 46. Figs. 12-13 and 16-18 further show arms 48 and 46 each having a distal end with an externally threaded male connection, numbered 12' and 12 respectively. Arms 48 and 46 are separated by a single cross member 44. The angle 18' between arm 48 and cross member 44, shown in Figs. 12-13 and 16-18, is approximately 90°. The angle 18 between arm 46 and cross member 44, also shown in Figs. 12-13 and 16-18, has a similar dimension of approximately 90°. Centrally between arm 48 and arm 46, and connected through the surface of cross member 44 in an opposed position from arms 48 and 46, Figs. 12-14 and 16-18 show a short outflow connector 4 adapted for connection to water delivery pipe 24. In addition, Figs. 13 and 15-18 show a flattened lower surface 74 extending across single cross member 44. Although such use is not critical, informational or design markings (not shown) could be attached to or formed into flattened lower surface 74. Figs. 12, 14, and 16-18 show a flattened upper surface, numbered 76' and 76 respectively, on opposing ends of single cross member 44. Flattened upper surfaces 76' and 76 can help to form an overall aesthetically pleasing for the present invention, or in the alternative could be used for the addition of informational or design markings (not shown). The second preferred embodiment of shorter water delivery member 72 also has a third male-threaded showerhead connection 64, as shown in Figs. 12-16 and 18. Although connection 64 could be used for attachment of any type of showerhead, in the second preferred embodiment, although

not shown, it is contemplated for a hand-held showerhead to be optionally attached to each connection 64, such as hand-held showerhead unit 28b in Fig. 3. When hand-held showerhead unit 28b is not needed or wanted for use, Figs. 12-15 show a female-threaded cap 66 contemplated for watertight attachment to connection 64 in place of hand-held showerhead unit 28b. Arrows in Figs. 12-15 show cap 66 poised for attachment to showerhead connection 64. Figs. 12-16 show barrel valves 58' and 58 being attached through showerhead attachment arms 48 and 46, respectively, while Figs. 12-15 and 17-18 show the push-button controls 56' and 56 contemplated for selective water cut-off in the second embodiment of the smaller water delivery member 72. In addition, Figs. 12-15 show barrel valves 58 and 58' in opened positions.

To use the present invention, larger water delivery members 2 and 70, can be used alone or in combination with smaller water delivery members 42 and 72 to convert water delivery pipe 24 into a water delivery means having two, three, four, five, or six showerheads 28 attached thereto. Any type of showerhead 28 can be attached to threaded male connections 12, including hand-held showerheads 28b connected to flexible tubing 40. Also, both larger water delivery members 2 and 70, as well as smaller water delivery members 42 and 72, can have shut-off valves 26 or barrel valves 58 or 58'. Although larger water delivery members 2 and 70, as well as smaller water delivery members 42 and 72, can each be made from assembled components, in the first and second preferred embodiments both larger water delivery members 2 and 70, as well as smaller water delivery members 42 and 72, are made as a one-piece unit with smooth transitions. Also, in the first and second preferred embodiments it is contemplated for cross member 44 to be approximately three inches in length. Further, it is contemplated for the smaller water delivery members to be dimensioned to allow water flow at a rate that would permit the use of four showerheads at a minimum water flow rate of four gallons per minute. Hazardous materials applications are particularly suitable to the present invention. Due to the unique configuration of the present invention, if made available to firemen to rinse off their clothing and gear after a fire, the water delivery system of the present invention would provide rinsing of the

1 men and gear both faster and more effectively than with other shower systems. Also, the present  
2 invention has an advantage of two people (not shown) of like or unlike stature being able to  
3 shower in the same stall with adequate water directed on each.

4

5

1 CLAIMS

2 What is claimed is:

3 1. A water delivery system for showering purposes that allows water delivered from one  
4 positive pressure water outflow pipe to alternatively be divided into two, three, and four water  
5 streams, said system comprising:

6 an elongated larger water delivery member having two approximately parallel  
7 showerhead attachment arms, said attachment arms each having a distal end, said distal ends both  
8 extending in substantially the same direction and each having a plurality of male threads adapted  
9 for showerhead attachment, said larger water delivery member also having a first cross member  
10 with an outside surface, said first cross member being in fluid communication with one of said  
11 attachment arms, a second cross member in fluid communication with the other of said  
12 attachment arms, and an obtuse angle between said first cross member and said second cross  
13 member, said second cross member also being in fluid communication with said first cross  
14 member, said attachment arms each being positioned at an approximate 90° angle relative to said  
15 first cross member, said larger water delivery member further having an outflow connector in  
16 fluid communication with said first cross member, said outflow connector having a distal end  
17 and a plurality of female threads on said distal end adapted for positive flow water outfall pipe  
18 attachment, said outflow connector and the one of said attachment arms in fluid communication  
19 with said first cross member each depending from said outside surface in substantially opposite  
20 directions from one another;

21 two shorter water delivery members each having two approximately parallel showerhead  
22 connection arms with two approximately 90° angles between said connection arms, said  
23 connection arms each having a distal end, said distal ends both extending in substantially the  
24 same direction and each having a plurality of male threads adapted for showerhead attachment,  
25 said shorter water delivery members each also having a single cross member with an outside  
26 surface, said single cross member being in fluid communication with both of said connection

1 arms, said shorter water delivery members each further having an extended outflow connector in  
2 fluid communication with said single cross member, said extended outflow connector having an  
3 extended distal end and a plurality of female threads on said extended distal end adapted for  
4 positive flow water outfall pipe attachment as well as approximately 90° of rotation without fluid  
5 leakage, said female threads of said shorter water delivery members also each being adapted for  
6 connection to said distal ends of said larger water delivery member, said extended outflow  
7 connector depending from said outside surface of said single cross member in a direction  
8 substantially opposite to said connection arms; and

9 a plurality of showerheads each having a capability for 360° of rotation and being adapted  
10 for water-tight connection to said distal ends of said attachment arms and said connection arms  
11 so that when said larger water delivery member and said shorter water delivery member are used  
12 individually and in combination with one another and said showerheads, and are connected to a  
13 positive pressure water outflow pipe, a broader distribution of water is provided for more  
14 thorough rinsing capability in a shorter period of time than can be accomplished with water  
15 delivered from a single one of said showerheads attached to the same positive pressure water  
16 outflow pipe.

17 2. The system of claim 1 wherein at least one of said showerheads further comprises a  
18 water cutoff valve.

19 3. The system of claim 2 wherein at least one of said water cutoff valves is a  
20 barrel valve, said obtuse angle is approximately 145°, said single cross member is approximately  
21 three inches in length, and said shorter delivery members are each adapted for a minimum water  
22 flow of approximately four gallons per minute.

23 4. The system of claim 1 further comprising at least one threaded swivel adaptor adapted  
24 for attachment to said outflow connector of said larger water delivery member and said extended  
25 outflow connectors of said shorter water delivery members.

26 5. The system of claim 1 wherein said larger water delivery member, said shorter

1 water delivery members, and said showerheads are selected from a group of larger water delivery  
2 members, shorter water delivery members, and showerheads made from materials consisting of  
3 PVC, ABS plastic, stainless steel, copper, brass with chrome-plating, gold plating, colored  
4 material, textured materials, and material having surface designs.

5 6. The system of claim 1 wherein at least one of said showerheads has a hand-  
6 held configuration.

7 7. The system of claim 1 wherein said larger water delivery member and said  
8 shorter delivery members are selected from a group consisting of larger water delivery members  
9 and shorter water delivery members made from assembled components, and larger water delivery  
10 members and shorter water delivery members made as one-piece units with smooth transitions.

11 8. The system of claim 1 wherein at least one of said shorter delivery members further  
12 comprises a male-threaded third showerhead connection, said third showerhead connection  
13 depending centrally from said single cross member at approximately 90° relative to said extended  
14 outflow connector, said system also further comprising a female-threaded cap adapted for  
15 attachment to said third showerhead connection. so that when two of said shorter water delivery  
16 members are connected to said larger water delivery member water delivered from one positive  
17 pressure water outflow pipe may be additionally divided into five and six water streams.

18 9. A water delivery system for showering purposes that allows water delivered from one  
19 positive pressure water outflow pipe in a shower stall with a ceiling to alternatively be divided  
20 into two, three, and four water streams, said system comprising:

21 an elongated larger water delivery member having two approximately parallel  
22 showerhead attachment arms, said attachment arms each having a distal end, said distal ends both  
23 extending in substantially the same direction and each having a plurality of male threads adapted  
24 for showerhead attachment, said larger water delivery member also having a short cross member  
25 with an outside surface, said short cross member being in fluid communication with one of said  
26 arms, a long cross member in fluid communication with the other of said arms, and an obtuse

1 angle between said short cross member and said long cross member adapted for ceiling clearance  
2 of said distal ends when said larger water delivery member is rotated for installation and removal  
3 from a raised positive pressure water outflow pipe intended for showerhead connection, said  
4 short cross member also being in fluid communication with said long cross member, said  
5 attachment arms each being positioned at an approximate 90° angle relative to said first cross  
6 member, said larger water delivery member further having an outflow connector in fluid  
7 communication with said short cross member, said outflow connector having a distal end and a  
8 plurality of female threads on said distal end adapted for positive flow water outfall pipe  
9 attachment, said outflow connector and the one of said attachment arms in fluid communication  
10 with said short cross member each depending from said outside surface in substantially opposite  
11 directions from one another;

12 two shorter water delivery members each having two approximately parallel showerhead  
13 connection arms with two approximately 90° angles between said connection arms, said  
14 connection arms each having a distal end, said distal ends both extending in substantially the  
15 same direction and each having a plurality of male threads adapted for showerhead attachment,  
16 said shorter water delivery members also each having a single cross member with an outside  
17 surface, said single cross member being in fluid communication with both of said connection  
18 arms, said shorter water delivery members each further having an extended outflow connector in  
19 fluid communication with said single cross member, said extended outflow connector having an  
20 extended distal end and a plurality of female threads on said extended distal end adapted for  
21 positive flow water outfall pipe attachment as well as approximately 90° of rotation without fluid  
22 leakage, said female threads on each of said shorter water delivery members also being adapted  
23 for connection to said distal ends of said larger water delivery member, said extended outflow  
24 connector depending centrally from said outside surface of said single cross member in a  
25 direction substantially opposite to said connection arms; and

26 a plurality of showerheads each having a capability for 360° of rotation and being adapted

1 for water-tight connection to said distal ends of said attachment arms and said connection arms  
2 so that when said larger water delivery member and said shorter water delivery member are used  
3 individually and in combination with one another and said showerheads, and are connected to a  
4 positive pressure water outflow pipe, a broader distribution of water is provided for more  
5 thorough rinsing capability in a shorter period of time than can be accomplished with water  
6 delivered from a single one of said showerheads attached to the same positive pressure water  
7 outflow pipe.

8 10. The system of claim 9 wherein at least one of said showerheads further comprises a  
9 water cutoff valve.

10 11. The system of claim 9 wherein at least one of said water cutoff valves is a barrel  
11 valve, said obtuse angle is approximately  $145^{\circ}$ , said single cross member is approximately three  
12 inches in length, and said shorter delivery members are each adapted for a minimum water flow  
13 of approximately four gallons per minute.

14 12. The system of claim 9 further comprising at least one threaded swivel adaptor  
15 adapted for attachment to said outflow connector of said larger water delivery member and said  
16 extended outflow connectors of said shorter water delivery members.

17 13. The system of claim 9 wherein said larger water delivery member, said  
18 shorter delivery members, and said showerheads are selected from a group of larger water  
19 delivery members, shorter water delivery members, and showerheads made from materials  
20 consisting of PVC, ABS plastic, stainless steel, copper, brass with chrome-plating, gold plating,  
21 colored material, textured materials, and material having surface designs.

22 14. The system of claim 9 wherein at least one of said showerheads has a hand-  
23 held configuration.

24 15. The system of claim 9 wherein said larger water delivery member and said  
25 shorter delivery members are selected from a group consisting of larger water delivery members  
26 and shorter water delivery members made from assembled components, and larger water delivery

members and shorter water delivery members made as one-piece units with smooth transitions.

16. The system of claim 9 wherein at least one of said shorter delivery members further comprises a male-threaded third showerhead connection, said third showerhead connection depending centrally from said single cross member at approximately 90° relative to said extended outflow connector, said system also further comprising a female-threaded cap adapted for attachment to said third showerhead connection so that when two of said shorter water delivery members are connected to said larger water delivery member water delivered from one positive pressure water outflow pipe may be additionally divided into five and six water streams.

17. A method of water delivery for showering purposes that allows water delivered from one positive pressure water outflow pipe to alternatively be divided into two, three, and four water streams, said method comprising the steps of:

providing an elongated larger water delivery member having two approximately parallel male-threaded showerhead attachment arms, a first cross member, a second cross member, an obtuse angle between said first cross member and said second cross member, each of said attachment arms each being positioned at an approximate 90° angle relative to said first cross member, and a female-threaded outflow connector in fluid communication with said first cross member; two shorter water delivery members each having two approximately parallel male-threaded showerhead connection arms with a single cross member connected therebetween, in addition to a female-threaded extended outflow connector having an extended female thread pattern adapted for 90° of rotation relative to a positive pressure water outflow pipe without fluid leakage and being in fluid communication with said single cross member; a plurality of showerheads each having a capability for 360° of rotation; and a positive pressure water outflow pipe;

optionally connecting said outflow connector of said larger water delivery member to said positive pressure water outflow pipe, and connecting one of said shower heads to each of said showerhead attachment arms on said larger water delivery member;

1 optionally connecting said outflow connector of said larger water delivery member to said  
2 positive pressure water outflow pipe, connecting one of said shorter water delivery members to  
3 one of said showerhead attachment arms on said larger water delivery member, and further  
4 connecting one of said shower heads to the remaining one of said showerhead attachment arms  
5 on said larger water delivery member and each of said showerhead attachment arms on said  
6 shorter water delivery member;

7 optionally connecting said outflow connector of said larger water delivery member to said  
8 positive pressure water outflow pipe, connecting one of said shorter water delivery members to  
9 each of said showerhead attachment arms on said larger water delivery member, and further  
10 connecting one of said shower heads to each of said showerhead attachment arms on said shorter  
11 water delivery member; and

12 in the alternative if no optional connections above have been made, connecting said  
13 extended outflow connector of said shorter water delivery member to said positive pressure water  
14 outflow pipe and further connecting one of said shower heads to each of said showerhead  
15 attachment arms on said shorter water delivery member so that said larger water delivery member  
16 and said smaller water delivery members are used alone and in combination to divide a water  
17 stream flowing from said positive pressure water outflow pipe alternatively into two, three, and  
18 four water streams for enhanced showering capability and versatility.

19 18. The method of claim 17 wherein said step of providing said shower heads further  
20 comprises the step of providing at least one showerhead with a hand-held configuration and the  
21 step of providing at least one showerhead with a water cutoff valve.

22 19. The method of claim 18 further comprising the step of providing a plurality of  
23 threaded swivel adaptors, the step of connecting one of said threaded swivel adaptors to said  
24 outflow connector of said larger water delivery member, and the step of connecting one of said  
25 threaded swivel adaptors to said extended outflow connectors of each of said shorter water  
26 delivery members; wherein said step of providing said water cut-off valves further comprises the

1 step of providing a plurality of barrel valves; wherein said step of providing said shorter water  
2 delivery members further comprises the step providing shorter water delivery members each  
3 having a male-threaded third showerhead connection with a removable female-threaded cap, and  
4 further comprising the step of optionally removing at least one of said female-threaded caps to  
5 attach one of said showerheads with a hand-held configuration so that when two of said shorter  
6 water delivery members with a male-threaded third showerhead connection are connected to said  
7 larger water delivery member, water delivered from one positive pressure water outflow pipe  
8 may be additionally divided into five and six water streams.

9 20. The method of claim 17 wherein said step of providing said obtuse angle further  
10 comprises the step of providing an obtuse angle of approximately 145°, the step of providing said  
11 single cross member further comprises the step of providing a single cross member having a  
12 length dimension of approximately three inches, and said step of providing said shorter water  
13 delivery members further comprises the step providing shorter water delivery members each  
14 having a minimum water flow capacity of approximately four gallons per minute.  
15  
16

1 ABSTRACT OF THE DISCLOSURE

2  
3 A water delivery system for shower stalls that divides water delivered from one outflow  
4 alternatively into two, three, four, five, and six water streams. The system comprises an  
5 elongated larger water delivery member having two approximately parallel showerhead  
6 attachment arms with two  $90^{\circ}$  angles and one approximately  $145^{\circ}$  angle between them. The  
7 system also comprises a shorter water delivery member having two approximately parallel  
8 showerhead attachment arms with two  $90^{\circ}$  angles between them, and an optional third  
9 showerhead connector. The  $145^{\circ}$  angle in the larger water delivery member allows ample ceiling  
10 clearance for the system when the larger member is rotated for its installation and removal from  
11 water delivery pipes positioned at heights commonly used for human shower applications. Also,  
12 the female connection on the shorter water delivery member of the system has a sufficiently  
13 extended threaded connection to allow the shorter water delivery member to be rotated 90  
14 degrees from a horizontal to a vertical orientation where the uppermost showerhead could be  
15 used to wash one's hair while the lower showerhead could remain directed toward the user's  
16 body. In the horizontal position, two people could simultaneously shower in the same shower  
17 stall and each have a water stream directed exclusively toward them. Any type of showerhead  
18 could be attached to the ends of the larger and smaller water delivery members, including hand-  
19 held showerheads. Applications, although not limited to such use, could include such diversity  
20 as routine personal hygiene to the rinsing of people exposed to hazardous materials.  
21

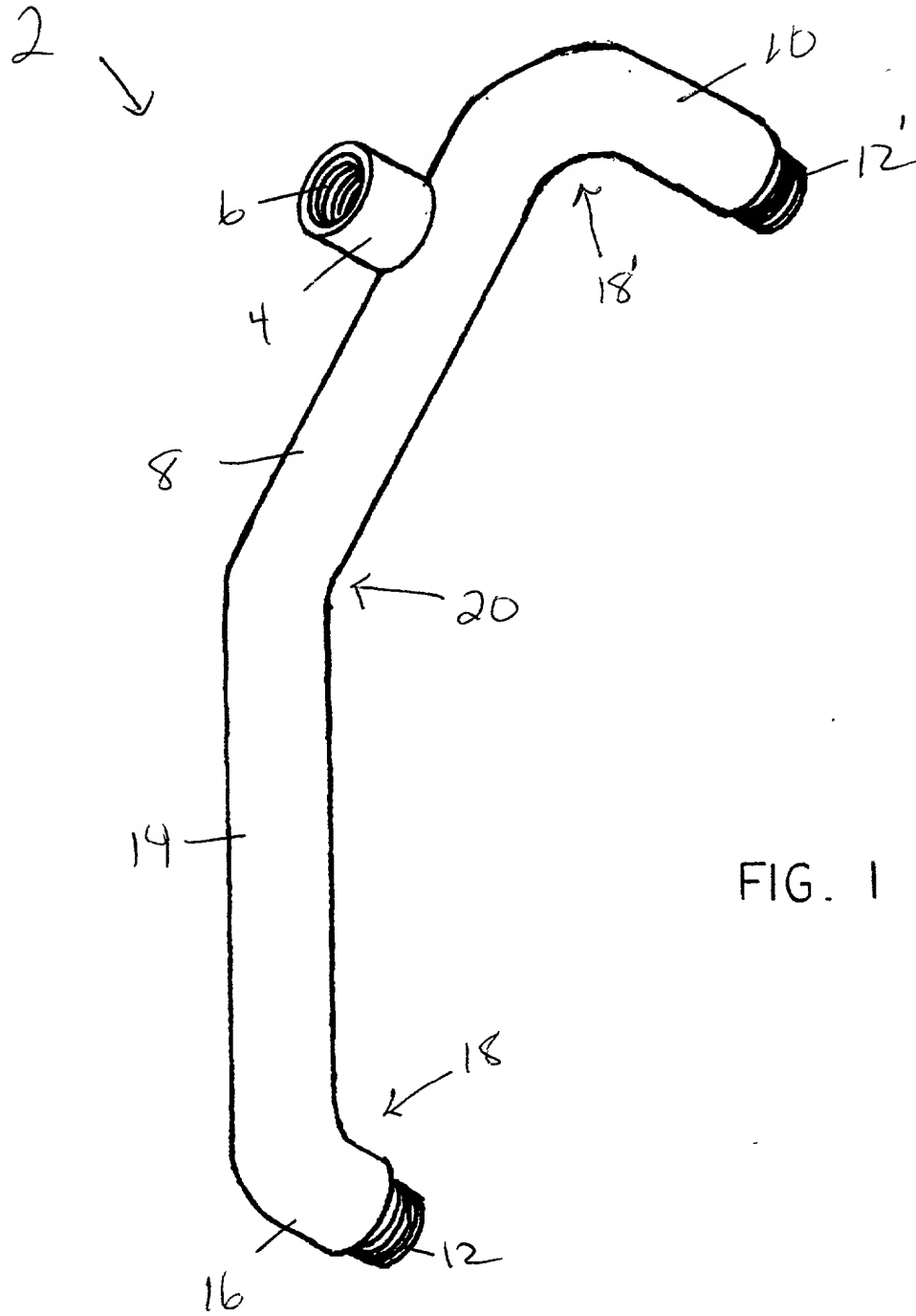


FIG. 1

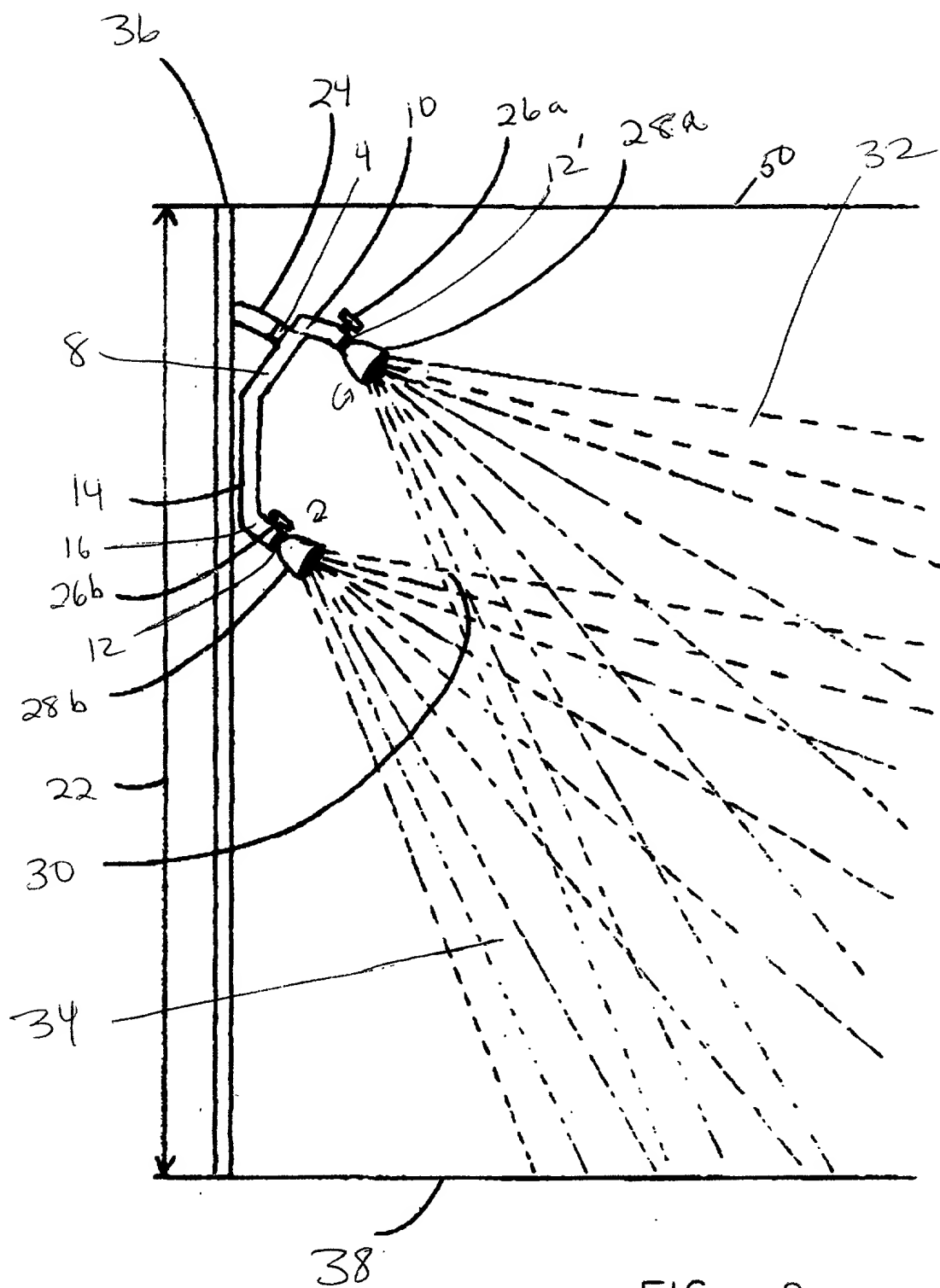


FIG. 2

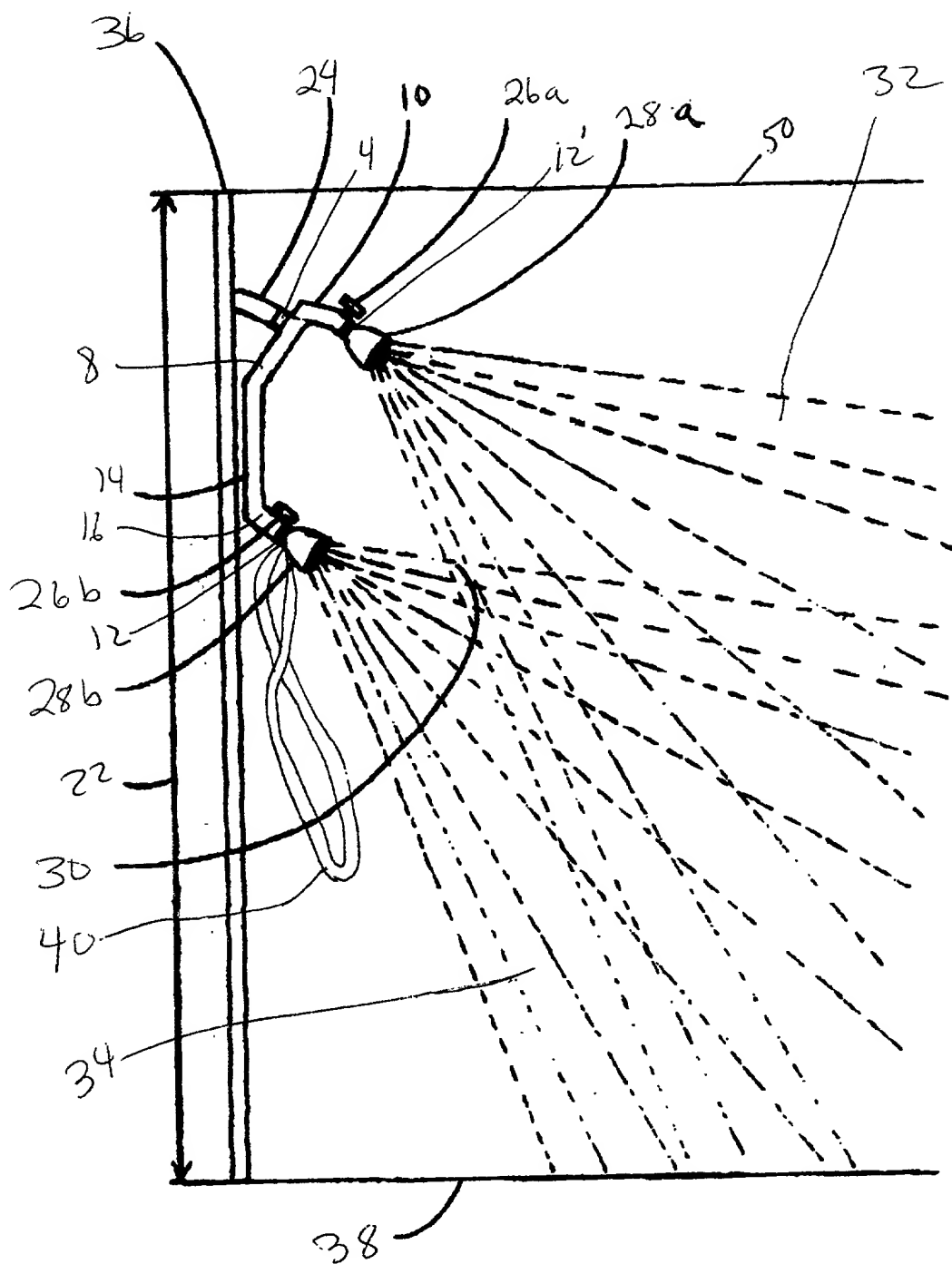


FIG. 3

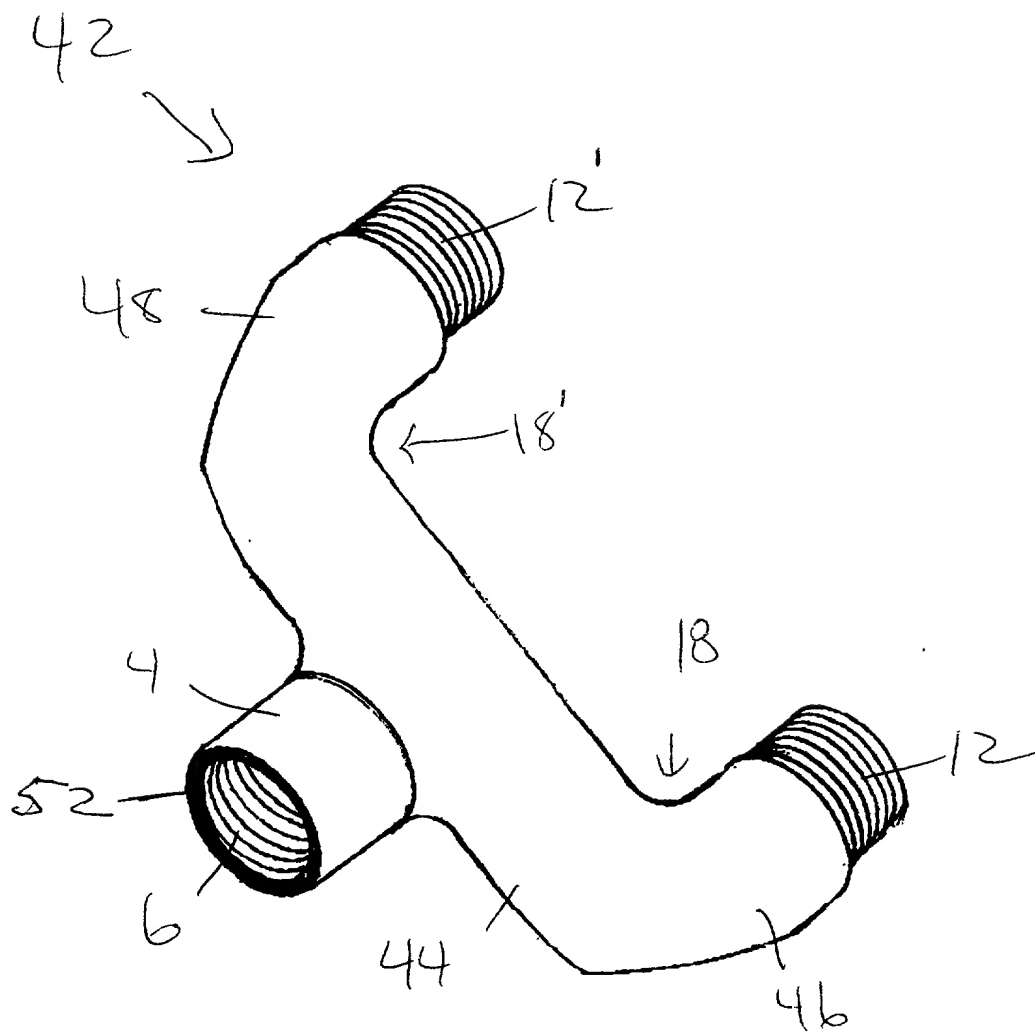


FIG. 4

[illegible]

FIG. 5

FIG. 6

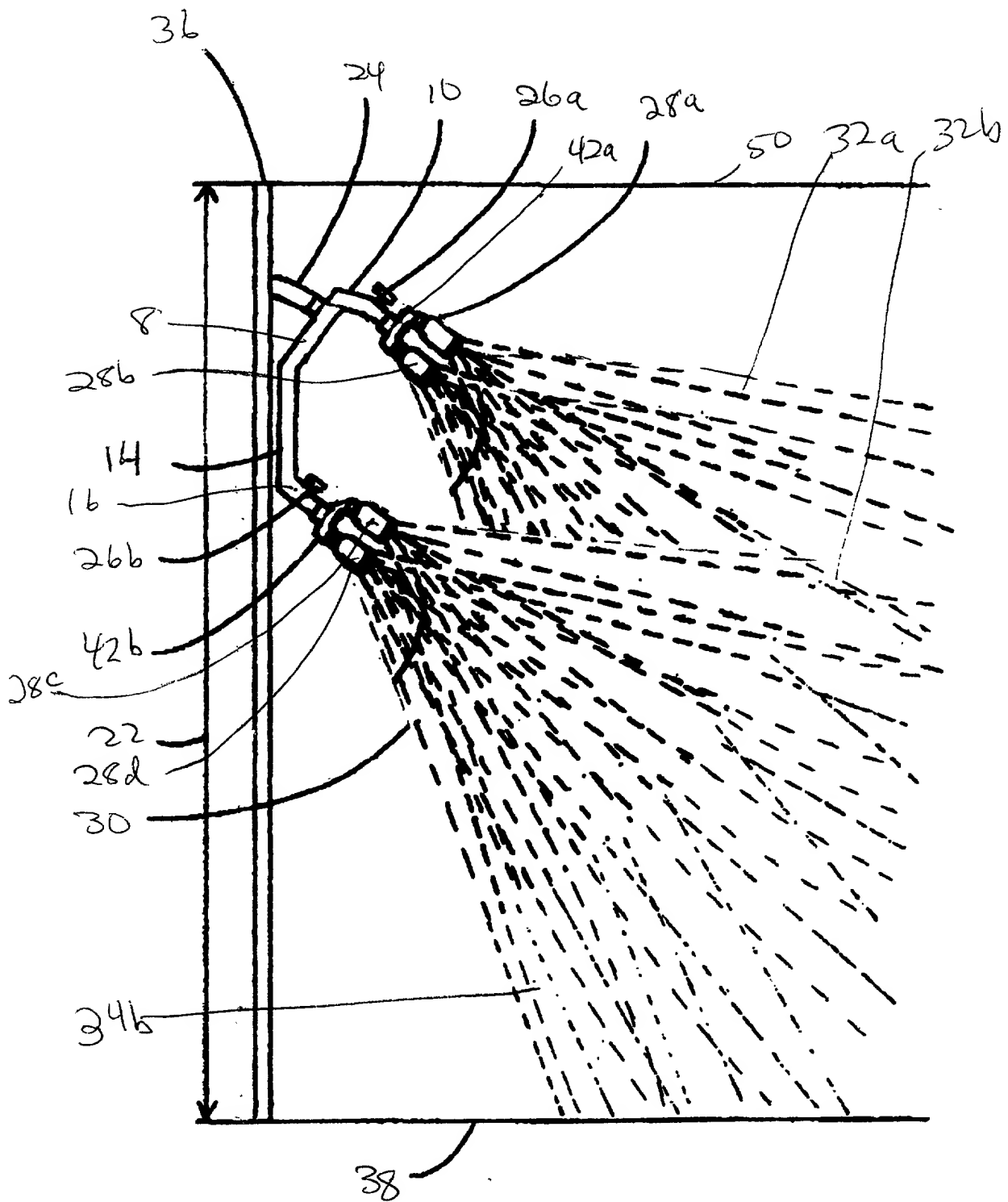


FIG. 7

FIG. 8

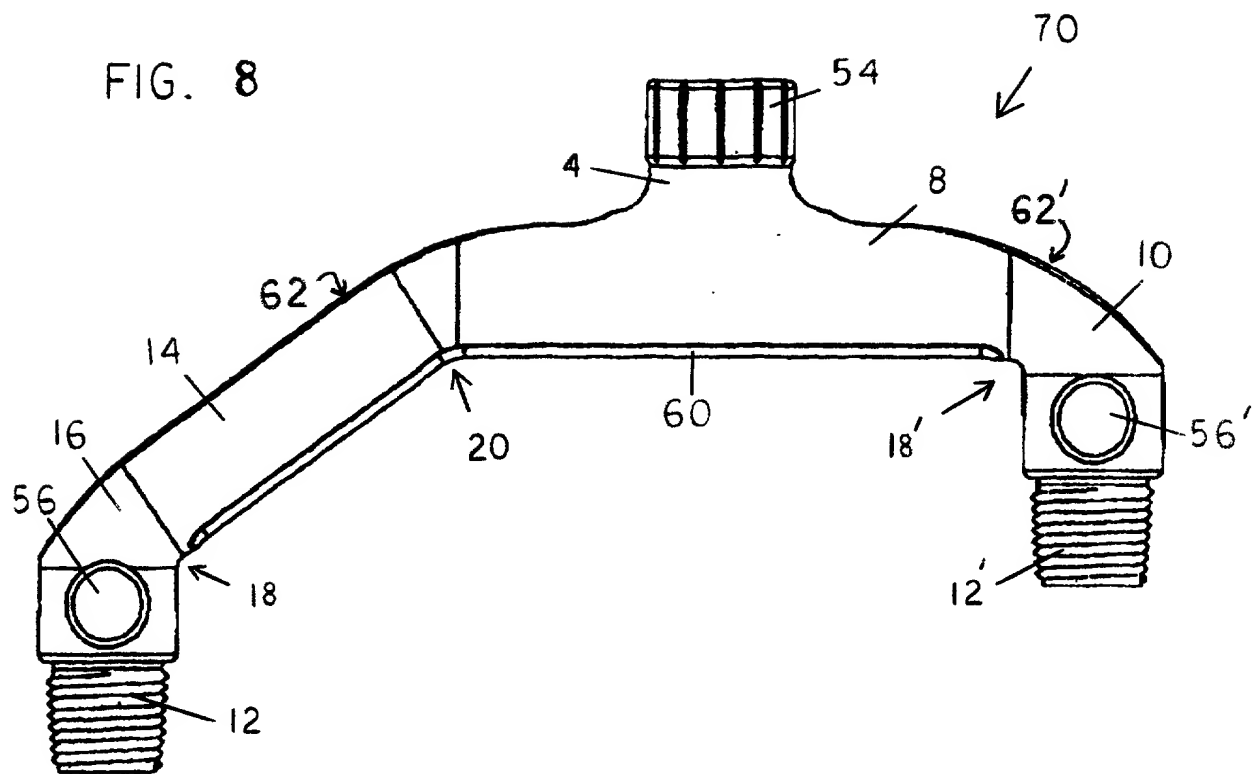
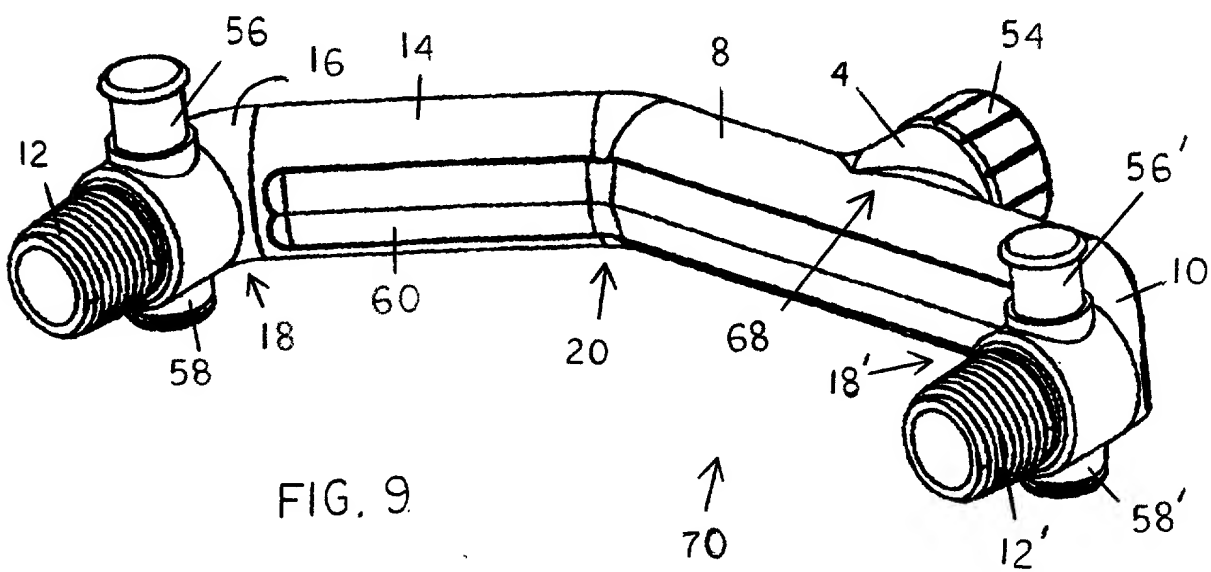


FIG. 9



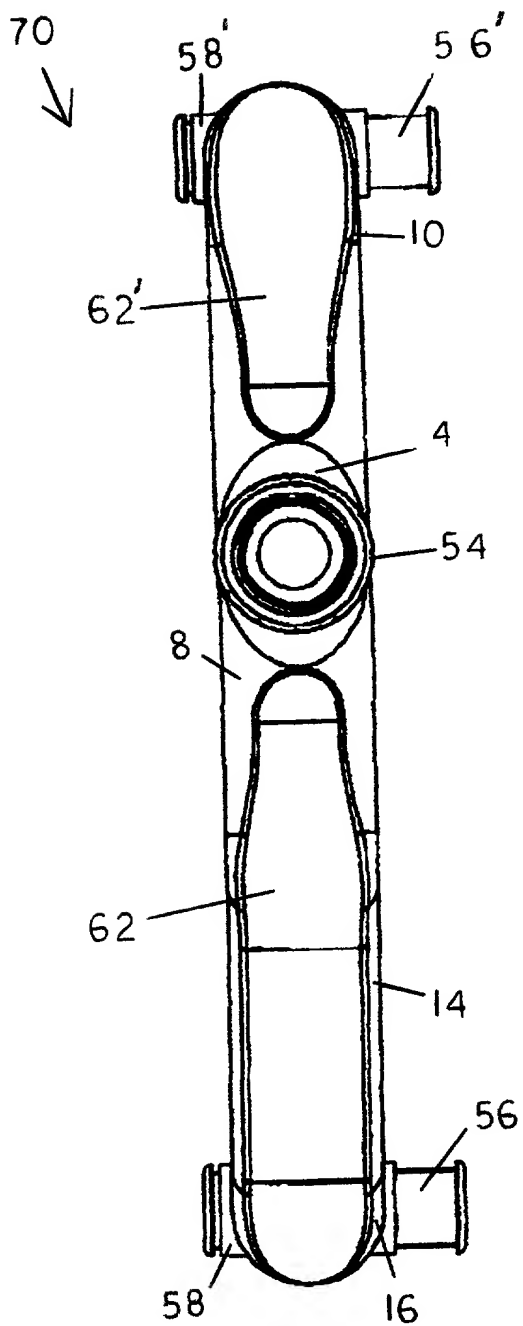


FIG. 10

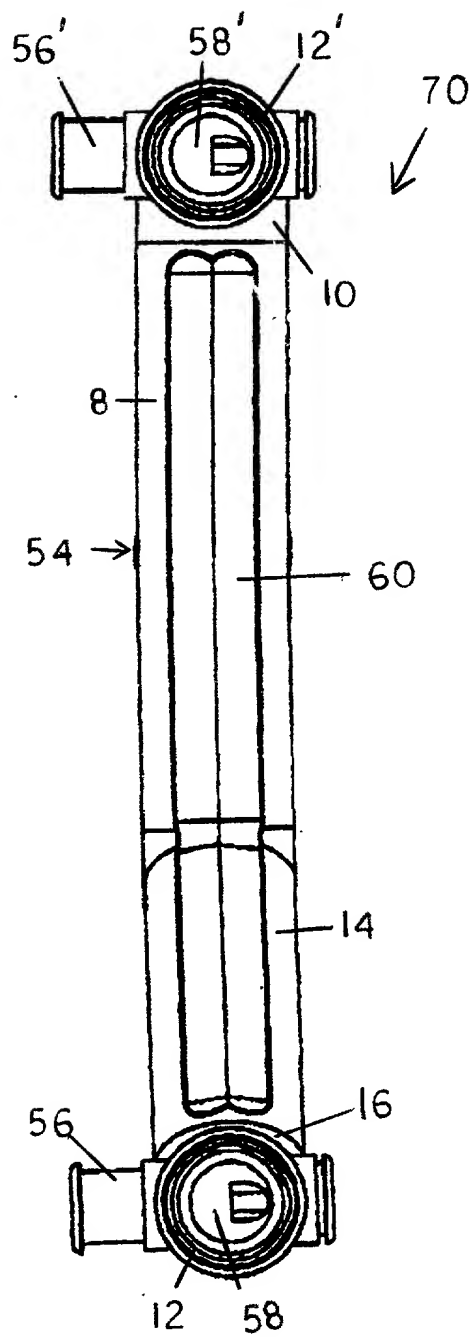


FIG. 11

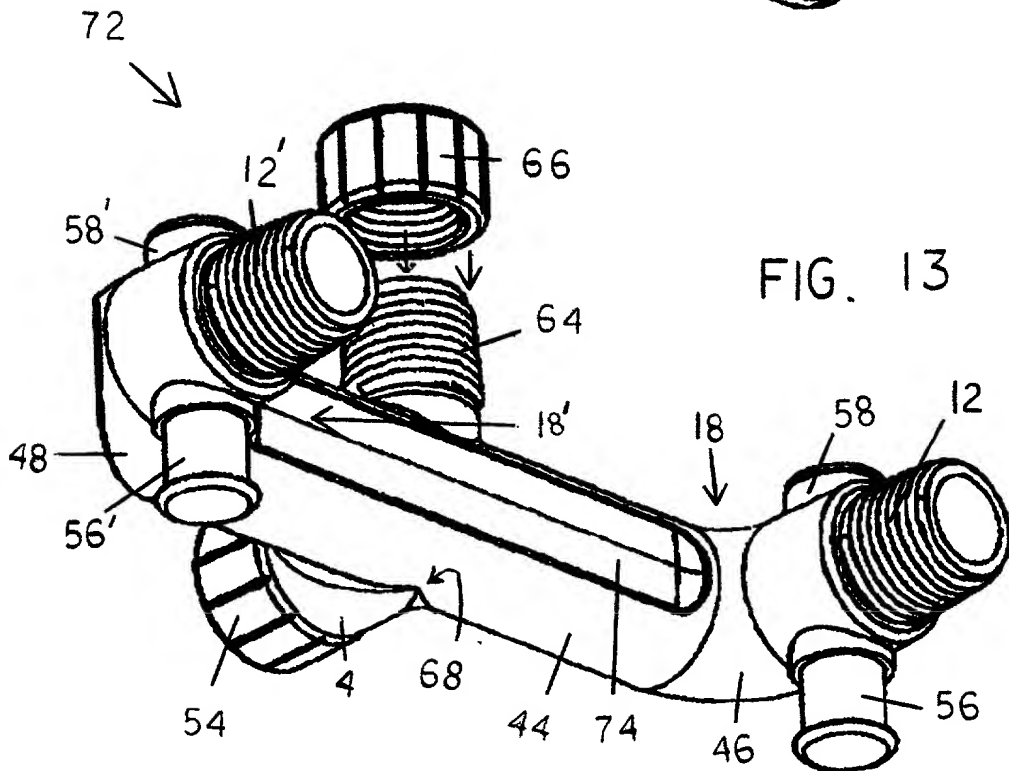
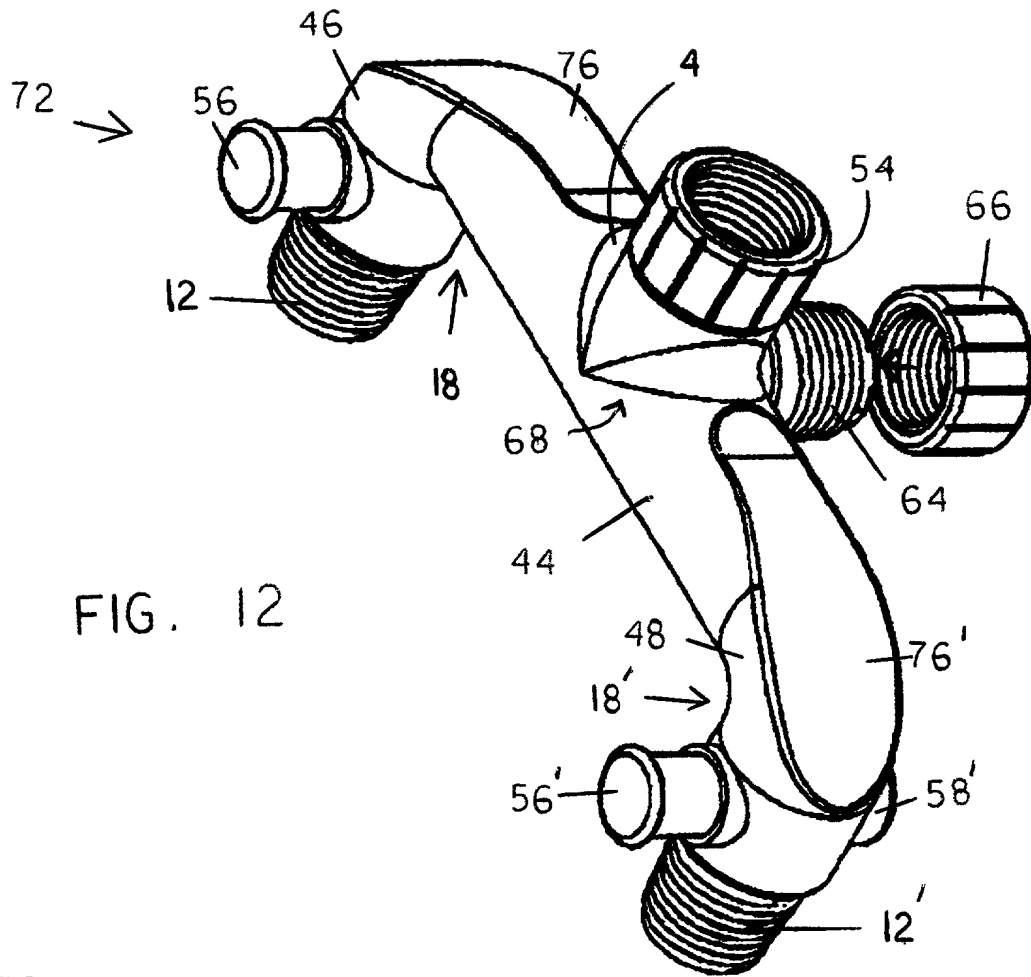


FIG. 14

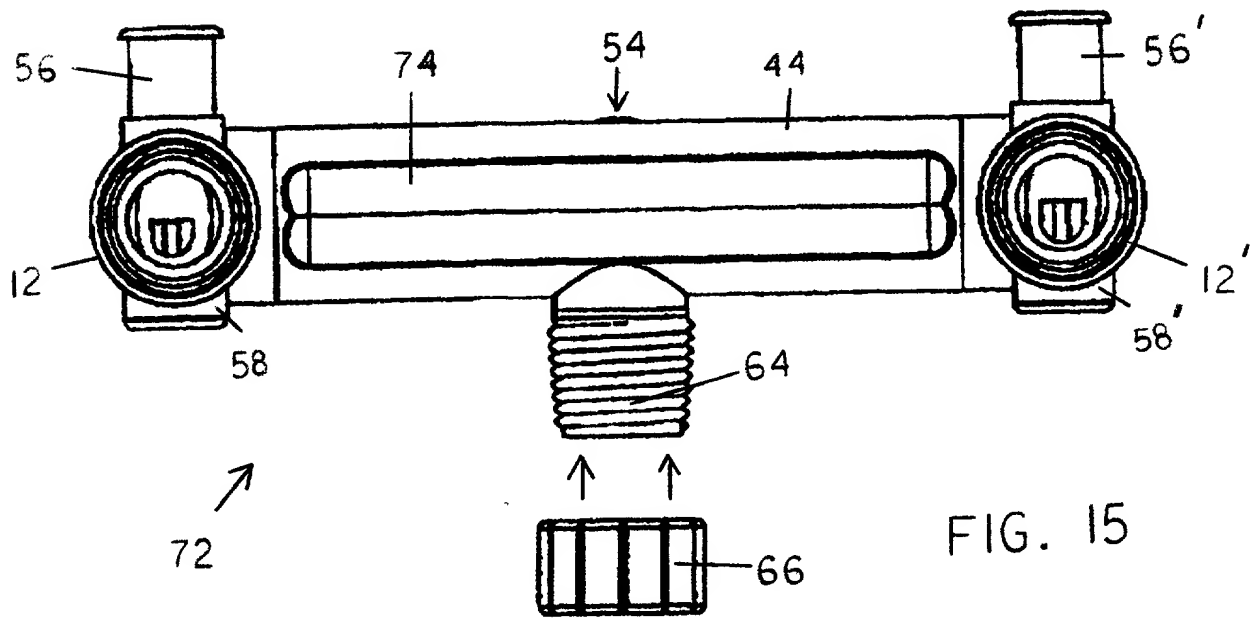
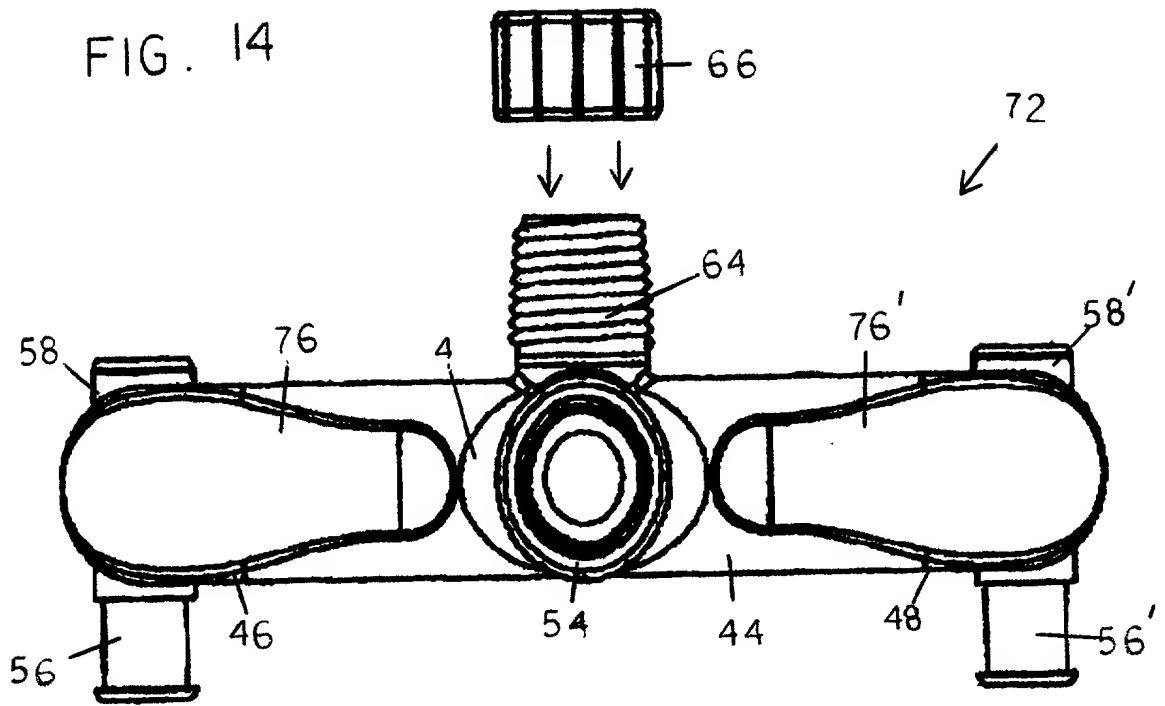
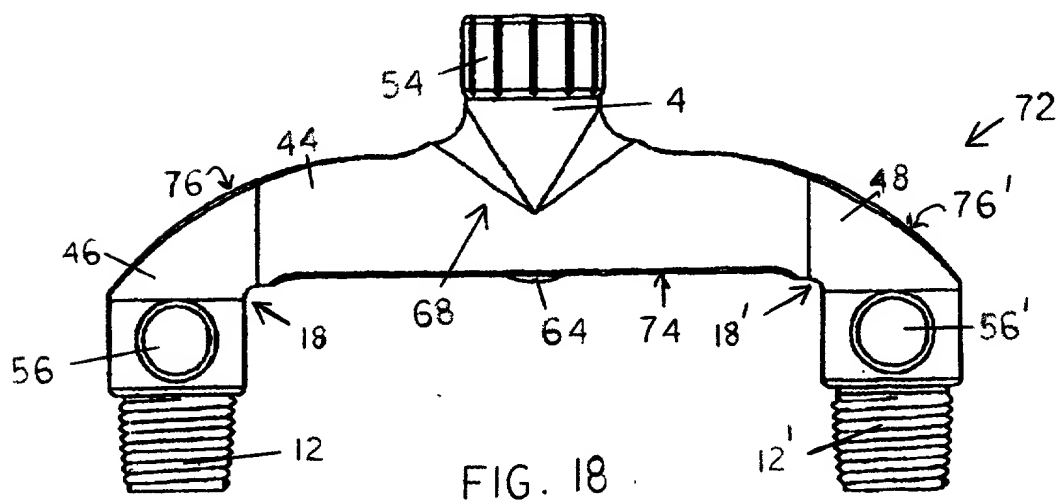
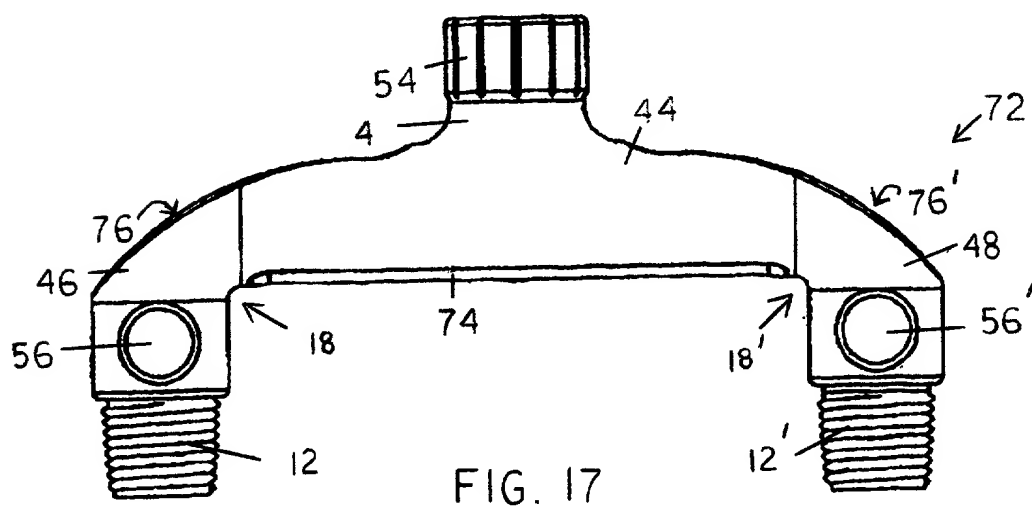
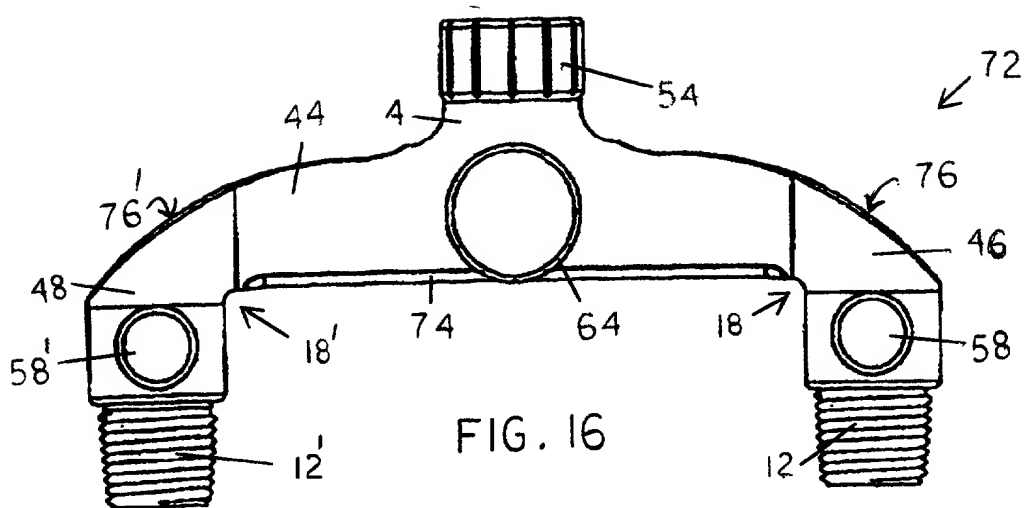


FIG. 15



# DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION

Attorney Docket Number

First Named Inventor

PETER J. COLMAN

COMPLETE IF KNOWN

Application Number

Filing Date

FEBRUARY 24, 2000

Group Art Unit

Examiner Name

☒ Declaration  
Submitted  
with Initial  
Filing

OR

☐ Declaration  
Submitted after  
Initial Filing

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

WATER DELIVERY SYSTEM WITH MULTIPLE HEAD CAPACITY

(Title of the Invention)

the specification of which

☒ is attached hereto  
OR

☐ was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37 Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code § 119 (a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365 (a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
NONE			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.
60/121,356	02-24-1999	

# DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under Title 35, United States Code §120 of any United States application(s), or §365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)
NONE			

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

☐ Customer Number

OR

☒ Registered practitioner(s) name/registration number listed below

Place Customer Number Bar Code Label here

Name	Registration Number	Name	Registration Number
DOROTHY S. MORSE	381977		

☐ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to: ☐ Customer Number or Bar Code Label

OR ☒ Correspondence address below

Name	DOROTHY S. MORSE				
Address	515 PARK DRIVE, NW				
Address					
City	BRADENTON	State	FL	ZIP	34209-1847
Country	UNITED STATES	Telephone	941-747-4313	Fax	941-748-4008

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:

☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))		Family Name or Surname	
PETER INGALLS		COLMAN	
Inventor's Signature	Peter Ingalls Colman		Date
Residence: City	BRADENTON	State	FL
	Country	UNITED STATES	Citizenship
			U.S.
Post Office Address	4301- 32nd STREET, WEST, UNIT C-11		
Post Office Address			
City	BRADENTON	State	FLORIDA
	ZIP	34205	Country
			UNITED STATES

☐ Additional inventors are being named on the supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto